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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/903,515      | 07/13/2001  | Bum Jae You          | YOUB3001/EM/6971    | 2652             |

23364 7590 01/14/2005  
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EXAMINER

LAVIN, CHRISTOPHER L

ART UNIT PAPER NUMBER

2621

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/903,515

Applicant(s)

YOU ET AL.

Examiner

Christopher L Lavin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07/10/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4 is/are allowed.
- 6) ☐ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. A substitute specification including the claims in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto (5,559,551).
5. In regards to claim 1, Sakamoto discloses in the paragraph starting at column 8, line 66 that “each color signal of the subject [...] is modeled to the quadratic function  $Fr(Y)$  and  $Fb(Y)$  represented by the luminance  $Y$ , and the permissible error limit of the quadratic function.” This is a three-dimensional color-modeling step. Three-dimensional has no real meaning when applied to a modeling step as specified in the claim, any model could be considered three-dimensional. The color signals are obtained from the camera (item 2) shown in figure 1. In the next paragraph Sakamoto notes that “the

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subject tracking apparatus can be realized, which can absorb the change of feature quantity  $C(i,j)$  due to the change of lighting condition". Thus the method disclosed by Sakamoto is intended to deal with images obtained under various illumination conditions. In the paragraph starting at column 8, line 2 Sakamoto discloses that an object is recognized by comparing it to past frames. Inherently in such a system is the need to detect new objects in the scene. In the paragraph starting at column 7, line 6 Sakamoto discloses that the target region is located by applying the color model. Sakamoto in the paragraph starting at column 9, line 12 discloses that shape analysis is performed. "So that the subject tracking apparatus can be realized, in which the information of shape is also utilized for identifying the subject." As Sakamoto discloses in the paragraph starting at column 6, line 48 pixels are analyzed based on the color model. Finally in the paragraph starting at column 11, line 65 Sakamoto discloses a movement estimation technique. "In this way, in the subject tracking apparatus, the specified area A for detecting the subject is changed until the effective position is detected.

***Allowable Subject Matter***

6. Claim 2 – 4 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: The art of record does not teach nor does it suggest the specific features called for in the claims, particularly creating a color model (a single Guassian Function) out of four quadratic functions representing average and standard deviation of hue and saturation for target tracking in a varying illumination setting.

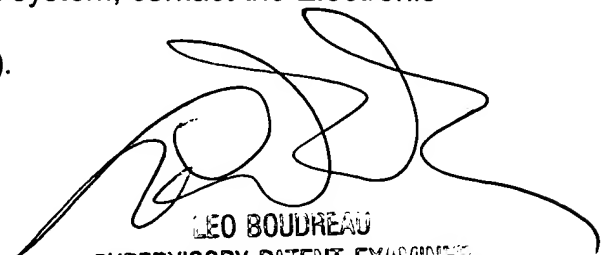
***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
9. US Patent 6,731,792 discloses in the paragraph starting at column 6, line 59 that the standard deviation and average of hue and saturation can be used for target tracking.
10. US Pat 6,760,465 discloses in the paragraph starting at column 7, line 6 that the standard deviation and average of hue and saturation can be used for target tracking.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L Lavin whose telephone number is 703-306-4220. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703)305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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